

CLAIMS

1. A printer having a housing that encloses, in a common cavity thereof, an  
5 arrangement comprising a digital area array display, a plurality of lenses, and an  
image plane onto which a photosensitive medium may be superposed, the  
arrangement is such that:
- (a) said plurality of lenses are located between said digital area array display  
and said image plane;
- 10 (b) said digital area array display, said plurality of lenses, and said image plane  
are spaced along an optical axis extending from said digital area array display  
through said plurality of lenses, and toward said image plane such that a digital  
image provided by said display can be brought into focus onto said imaging  
plane by said plurality of lenses; and
- 15 (c) one of said plurality of lenses is a transposable lens, said transposable lens  
capable of being transposed out of said optical axis during the operation of said  
printer, to increase the perceived resolution of the digital image focused onto  
said imaging plane.
2. The printer of claim 1 wherein said digital area array display is a  
microdisplay.
3. The printer of claim 1 wherein said digital area array display is a liquid  
crystal display.



8. The device of claim 6 wherein said first lever and said second lever are coupled to said transposable lens at different locations.

9. A device for transposing a transposable lens, said device comprising:

a first translating means for transposing a transposable lens in a first direction;

5 a second translating means for transposing said transposable lens in a second direction; and

a biasing means having a biasing means first end and biasing means second end, said biasing means being fixed at said biasing means first end, said biasing means second end being attached to said transposable lens.

10. A method of imaging a digital display onto an image plane, said method comprising the steps of:

a) providing a digital display, a plurality of lenses, and an image plane onto  
5 which a photosensitive medium may be superposed, said digital display, said plurality of lenses, and said image plane are spaced along an optical axis extending from said digital display through said plurality of lenses, and toward said image plane such that a digital image provided by said display can be  
10 of said plurality of lenses is a transposable lens, said transposable lens capable of being transposed out of said optical axis during the operation of said printer;

- b) illuminating said digital display with a first digital image data set for a fixed period of time, turning off said digital display;
- c) transposing said transposable lens a fixed distance, in a first direction;
- 15 d) illuminating said digital display for a second fixed period of time, using a second digital image data set, turning off said digital display; and
- e) whereby said method of imaging increases the perceived resolution of the digital image focused onto said imaging plane.

11. The method of claim 10 wherein a photosensitive medium defines said image plane.

12. The method of claim 10 wherein said digital display is a microdisplay.

13. The method of claim 10 wherein said digital display is a liquid crystal display.

14. The method of claim 10 wherein said fixed distance is a distance being less than the width of one pixel of said digital display.

15. The method of claim 14 wherein said fixed distance is equal to one half of the width of a pixel on said digital display.

16. The method of claim 10 wherein transposing said transposable lens said fixed distance for a second time, and using a third digital image data set to

illuminate said digital display for a third fixed period of time, turning off said  
5 digital display.

17. The method of claim 16 wherein said transposing is in a second direction,  
which is different from said first direction.

18. The method of claim 17 wherein transposing said transposable lens said  
fixed distance for a third time, and using a fourth digital image data set to  
illuminate said digital display for a fourth fixed period of time, turning off said  
5 digital display.

19. The method of claim 18 wherein said first, second, third and fourth fixed  
periods of time are a portion of said photosensitive medium's total exposure  
time.

20. The method of claim 18 wherein said jogging is in a third direction, which is  
different from said first and second directions.